

103 rejected claims 26-28

US-PAT-NO: 3842247

DOCUMENT-IDENTIFIER: US 3842247 A

TITLE: APPARATUS AND METHOD FOR MEASURING  
ENVELOPE DELAY UTILIZING .pi.-POINT TECHNIQUE

----- KWIC -----

Brief Summary Text - BSTX (9):

More specifically, envelope delay of a particular transmission facility is measured by propagating a test signal at a given frequency simultaneously through a reference path having essentially constant phase shift over the frequency range being considered and a test path including the transmission facility-under-test. The loss of the reference path is adjusted to equal the loss experienced in the facility-under-test at the test signal frequency. Outputs from the test path and reference path are algebraically summed. If the signals from the test path and reference path are equal and 180.degree. out of phase, a null occurs. The frequency of the test signal is then stepped by an increment related to the frequency spacing between nulls over a predetermined measurement frequency interval. The summed signal is evaluated to determine the number of nulls which occur during the measurement frequency interval. The number of nulls and the measurement frequency interval are utilized to yield a measure of envelope delay and, hence, the envelope delay distortion and phase distortion of the facility-under-test. This process is repeated for additional measurement frequency intervals over the frequency band of the facility being

evaluated.

Detailed Description Text - DETX (95):

Additionally, a value for the average envelope delay  
.tau.A of  
facility-under-test 111 is calculated as follows:

Detailed Description Text - DETX (97):

the computer value of average envelope delay is also  
printed out on  
input/output unit 135. Then, block 341 terminates the test  
routine.

Detailed Description Text - DETX (98):

The calculated average envelope delay value may be  
employed as a new  
estimate of the envelope delay of facility-under-test 111  
for re-running the  
phase measurement routine. This should, in general, result  
in a smaller peak  
deviation. ##SPC1##